Mines and Mineral Activities 1985

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Introduction

This report covers mines and mineral activities for the Yukon and Northwest Territories for the calendar year 1985.

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Northwest Territories

Mineral shipments reported by Statistics Canada as mineral production in the Northwest Territories during calendar year 1985 were estimated to have a value of $653.6 million compared with $746.4 million during 1984. Much of the decrease in production value was due to the sharp decline in zinc prices during the year and low gold prices.

Ten mines operated in the N.W.T. at the beginning of 1985. However, low silver prices forced *Terra Mines Ltd.* to close its Silver Bear Mine in the Camsell River area in April. Also, low gold prices caused concern at some gold mines and led to the closing of *Royex Gold Mining Corporation's* small Shear Lake Mine in early September.

The leading zinc and lead producer, the Pine Point Mine put out about the same amount of concentrate as during the previous year, while the Polaris Mine increased its zinc and lead output by 10 percent and 7 percent respectively over the previous year. At year's end, *Pine Point Mines Limited* announced production plans to maximize production rates for 1986 and 1987 from the best ore sources available to respond to unanticipated and continuing depressed metal prices.

Combined production of gold from the Lupin, Con, Giant, Shear Lake and Salmita mines increased by seven percent over the previous year. Operations at Canada Tungsten's tungsten mine and at the Nanisivik zinc-lead-silver mine continued normally despite the depressed tungsten, zinc and lead prices.

Exploration activities in the N.W.T. showed significant recovery during the year with expenditures totalling approximately $45 million compared with a peak of $50 million during 1981. More than half of the 1985 expenditures were directed to gold exploration in Slave structural province, District of Mackenzie. Another 10 percent was directed to gold exploration in District of Keewatin. Large expenditures were made on the Bullmoose Lake gold property and Thor Lake beryllium - rare earth property.

In recent years gold exploration results have been encouraging in the volcano-sedimentary belts of Slave Province and activity has been centred on the Indin Lake, Courageous Lake-MacKay Lake, Point Lake, Central (or Olga Lake) and Yellowknife sedimentary-volcanic belts. On the development side, *Terra Mines Ltd.* continued to drill its Bullmoose Lake gold property, east of Yellowknife, in order to prove up sufficient reserves for a production decision. Also, *Highwood Resources Ltd.* completed a decline and bulk sampled the beryllium-bearing T zone on its Thor Lake property, southeast of Yellowknife. In the Yellowknife area, *Goldrich Resources Inc.* in joint venture with *Treminco Resources Ltd.* commenced the driving of a decline on its Tom property during October 1985, in preparation for small-scale gold production in early 1986. The decline portal is about 1 200 m north-northwest of the Ptarmigan Mine.

Yukon

Mineral shipments in the Yukon during the calendar year 1985 were estimated to have a value of $57.9 million compared with $70.1 million in the previous year. The Yukon placer gold mining industry was again the leading component of the mining industry. Some 150 to 175 seasonal placer operators operated during the year to produce 3 098 kg of gold (98 000 troy ounces) valued at $43.1 million. This output represented 74 percent of the Yukon's total mineral production. While placer gold output increased 4.6 percent from the previous year, the value of this production declined by 3 percent because of lower gold prices during 1985.

Most of the remainder of Yukon's mineral production value came from the territory's only year-round operating silver mine, the *United Keno Hill Mines Limited* operation at Elsa and three other small seasonal silver mine operations. The seasonal lode mines were operated by *Archer, Cathro and Associates (1981) Limited, Springmount Operating Company Ltd.* and *Dawson Eldorado Mines Ltd.*

Cyprus Anvil Mining Corporation's Faro Mine and mill did not operate during 1985. A waste stripping program was terminated in late 1984 by Cyprus Anvil. However, in November 1985, the Faro Mine was sold to *Curragh Resources Corporation*. Curragh started stripping operations in December, 1985, with 100 new employees. Zinc and lead concentrate production will commence in mid-1986 following such pre-production development as additional waste stripping and tune up of the mill.

Exploration in 1985 was centred on precious metals prospects, particularly gold in the Mount Skukum-Wheaton River-Montana Mountain areas southwest of

Whitehorse, the Dawson Range west of Carmacks and the Ketza River property, south of Ross River. Also, *United Keno Hill Mines Limited* continued its major exploration effort with expenditures of $4.7 million on its silver properties in the Keno Hill-Galena Hill mining camp. Its efforts were rewarded in March, 1986 with the uncovering of a major silver lode at its Bellekeno Mine property.

On the Ketza River property south of Ross River, *Canamax Resources Inc.* proved up promising gold reserves by drilling and underground bulk sampling. In 1986, further underground and surface exploration, estimated to cost $3 million, will provide a base for a feasibility study. This will lead to a possible production decision by year-end 1986 or early 1987. At Canamax's Mt. Hundere property, north of Watson Lake, over two million tonnes of zinc-lead-silver resources were outlined by drilling during the year.

At Mount Skukum, *Total Erickson Resources Ltd.* proceeded with construction of its 300 tpd mill near its Cirque (or Main) gold deposit. The mine started up in March, 1986 and is expected to have a life of three years based on present ore reserves.

Northwest Territories

Mineral Production

Mineral shipments[1] in the Northwest Territories during the calendar year 1985 was valued at $653.6 million compared with $748 million in 1984. Much of the decrease in production value was due to a sharp decline in zinc prices during the year, lower gold prices and reduced silver output.

Base metal production increased by 3.0 percent despite weak zinc and lead prices. Combined mine-reported production[2] of the Northwest Territories' three zinc-lead producers, Pine Point, Polaris and Nanisivik, amounted to 344 319 t of zinc and 96 675 t of lead during the year. In December, Pine Point Mines Limited announced that it would mine and mill its most economic ore at full production rates during 1986 and 1987 in order to sustain the mine operation in view of unanticipated and continuing depressed zinc and lead prices. Under the revised production plan, operations will continue at least into 1987, but the future of the mine beyond 1987 is uncertain.

Combined mine-reported gold production from the Northwest Territories' five producers, the Lupin, Con, Shear Lake, Giant and Salmita mines, increased by 2.7 percent from the previous year, but gold prices remained low during 1985.

Canada Tungsten Mining Corporation Limited produced more tungsten in 1985 than during the previous year, but tungsten prices remained weak. Despite current depressed prices Canada Tungsten sees the Mactung Mine property in the N.W.T. as a world class tungsten property that it will acquire during 1986 from its parent Amax Inc.

Ten mines operated in the N.W.T. at the beginning of 1985. Low gold and silver prices during the year forced *Terra Mines Ltd.* to close its Silver Bear silver mine in April and *Royex Gold Mining Corporation* closed its small Shear Lake gold mine in early September. A summary of mineral production from the operating mines is given in Table 1.

[1] Statistics Canada reports "mineral shipments" from the mine establishments as mineral production.

[2] Reported by mining companies to the Government of the Northwest Territories and the Department of Indian Affairs and Northern Development.

The mineral industry of the N.W.T. accounted for 87.5 percent of the tungsten, 29.4 percent of the lead, 26 percent of the zinc, 15.1 percent of the gold and 2.8 percent of the silver produced in Canada during 1985. The value of these metals accounted for 7.2 percent of Canada's metallic mineral production in 1985 compared with 8.5 percent in 1984.

Operating mines and mills in the N.W.T. employed an average of 2 503 persons during 1985.

Table 1
Mineral Production of Operating Mines
Northwest Territories, 1984 and 1985

Company, Mine and Commodity	1984 t	1984 kg	1985 t	1985 kg
Canada Tungsten Mining Corporation Limited				
tungsten trioxide	3 528		3 717	
Cominco Ltd.				
Con Mine				
gold		2 772		2 427
silver		554.4		633
arsenic trioxide	1 269		1 100	
Polaris Mine				
zinc	110 483		117 804	
lead	28 439		39 300	
Echo Bay Mines Ltd.				
Lupin Mine				
gold		5 645.6		6 069
silver		820		1 186
Giant Yellowknife Mines Limited				
Giant Mine				
gold		1 997.4		2 030
silver		340.8		568
arsenic trioxide	3 415		1 600	
Salmita Mine				
gold		1 381.1		1 981
silver		262.4		359.7
Nanisivik Mines Ltd.				
zinc	67 682		60 956	
lead	6 996		5 144	
silver		27 061		23 512
Pine Point Mines Limited				
zinc	163 430		161 379	
lead	51 093		56 174	

Table 1 (continued)
Mineral Production of Operating Mines
Northwest Territories, 1984 and 1985

Company, Mine and Commodity	1984 t	1984 kg	1985 t	1985 kg
Royex Gold Mining Corporation				
B Zone and Shear Lake Mines				
gold		872.5		407
silver		68.1		34.5
Terra Mines Ltd.				
silver		24 620.5		6 746

Sources:

Department of Indian Affairs and Northern Development and the Government of the Northwest Territories. These production figures are those reported by the mines as production and may not match statistics Canada production figures which are based on metals sold or shipped.

Mines

Canada Tungsten Mining Corporation Limited

Canada Tungsten Mining Corporation Limited's Cantung Mine (a)* produced 3 717.5 t of tungsten trioxide (WO_3) contained in scheelite concentrate in 1985 compared with 3 528 t in 1984. Operations during the year were routine despite the depressed tungsten market. Ore reserves at year's end were sufficient for an additional four years of production, but the company was in the process of revising its estimated reserves.

Type:	Underground
Location:	Tungsten
Product:	Tungsten in scheelite concentrate
Mill Capacity:	1 000 tpd
Tonnes milled:	345 828 t
Reserves:	1.39 million t (Dec. 31, 1985)
Reserve Grade:	1.24% WO_3
Employees:	211

* Numbers or letters in parentheses indicate the location of the property on the map in the centerfold.

Cominco Ltd.-Con Mine

The Con Mine (c) in Yellowknife was been operating since 1938 and is the oldest producing mine in the N.W.T. The Con Mill treated 197 700 t of ore in 1985 to produce 2 427 kg of gold and 633 kg of silver.

The company completed its $9.6 million project to deepen the Robertson Shaft by 247 m to a depth of 1 900 m. The project will open another three levels to give access to at least 725 000 t of ore grading about 13.7 g of gold per t.

Type:	Underground
Location:	1.4 km south of Yellowknife
Product:	Gold, silver
Mill Capacity:	590 tpd
Tonnes Milled:	197 700 t
Reserves:	1.50 million t (Dec. 31, 1985)
Reserve grade:	14.4 g/t gold
Employees:	347

Cominco Ltd.-Polaris Mine

Cominco's Polaris zinc-lead mine (i), located on Little Cornwallis Island, N.W.T., is the world's most northerly base metal mine. Concentrate production is shipped over a 12-week season at the end of the Arctic summer when the sea is open for navigation.

Innovative low-cost improvements in operating practices resulted in the milling of 939 000 t of ore in 1985, well above the rated mill capacity. Zinc and lead production were both above last year's level by 10 percent and 7 percent respectively. Production amounted to 190 700 t of zinc concentrate containing 117 804 t of zinc and 39 300 t of lead concentrate containing 29 984 t of lead.

Initial development of the lower portion of the Polaris deposit called the "Keel Zone" was completed. The southern part of the Keel Zone supplied 90 percent of the ore milled in 1985.

Type:	Underground
Location:	100 km northwest of Resolute
Product:	Zinc, lead
Mill Capacity:	2 100 tpd
Tonnes Milled:	939 000 t
Reserves:	19.1 million t (Dec. 31, 1985)
Reserve Grade:	14.3% zinc and 3.8% lead
Employees:	269

Echo Bay Mines Ltd.-Lupin Mine

The Lupin gold mine's modern surface facilities (g) are compactly situated on the barrenlands near the west shore of Contwoyto Lake, 400 km northeast of Yellowknife. The mine is Canada's second largest gold producer and a proven low cost operation. During 1985, the mine set a new record by producing 6 069 kg of gold and 1 186 kg of silver from 570 930 t of ore. The production increase was seven percent above the previous year when 5 645.6 kg of gold was shipped. In January, 1985, a $16 million shaft sinking program was started to deepen the shaft from 390 m to 790 m by early 1987.

During the winter of 1984, Echo Bay again constructed a winter road, approximately 595 km from the Lupin Mine to Yellowknife. The annual resupply during the three months of the ice road operation during 1985 involved trucking 7 771 t of supplies and 14 547 m^3 of fuel in 855 truck loads.

Reserves at year end 1985 amounted to 2.78 million t grading 11.69 g of gold per t with additional reserves indicated at depth. A development drift driven during the year on the 650 m-level confirmed the extension of the Centre Zone of the Lupin deposit to a depth of 650 m. This is approximately 304 m below the depth used to calculate Lupin's ore reserves. Additional reserves were also being outlined in the L-19 Zone, an extension of the deposit to the east of the East Zone. The company expects to double its reserve when underground development is complete.

Type:	Underground
Location:	400 km northeast of Yellowknife
Product:	Gold, silver
Mill Capacity:	1 030 tpd
Tonnes Milled:	570 930 t
Reserves:	2.78 million t (Dec. 31, 1985)
Grade:	11.07 g/t gold
Employees:	376

Giant Yellowknife Mines Limited-Giant Mine

Production at the Giant Mine, located slightly north of Yellowknife, (c) remained steady during 1985 with an output of 2 030 kg of gold and 568 kg of silver, compared with 1 997.4 kg of gold and 340.8 kg of silver in 1984. A decline from the UBC zone, northwest of Giant Mine's B Shaft was being driven near year end to give access to 16 300 t of ore. A second decline was being driven 1.5 km north of the Supercrest Mine to give access to 38 000 t of ore.

As of December 31, 1985 proven and probable ore reserves amounted to 964 337 t grading 8.23 g gold per t. This figure is up marginally suggesting that underground exploration replaced the ore mined during the year.

Type:	Underground
Location:	2.4 km north of Yellowknife
Product:	Gold, silver
Mill Capacity:	1 000 tpd
Tonnes Milled:	302 349 t
Reserves:	964 337 t (Dec. 31, 1985)
Reserve Grade:	8.23 g/t gold
Employees:	295

Giant Yellowknife Mines Limited-Salmita Mine

The Salmita Mine (e) on Matthews Lake, 256 km northeast of Yellowknife, has emerged as a small but highly productive contributor to *Giant Yellowknife Mine Limited's* overall performance. For the year, the Salmita Mine produced 49.4 percent of the company's gold production, with output of 1 981 kg of gold compared with 2 030 kg from the Giant Mine at Yellowknife. Ore from the Salmita Mine is treated at the Tundra Mill, 5 km south of the mine. Salmita's output in 1985 increased to 64 535 t of ore grading 31.34 g of gold per t in 1985 from 55 062 t grading 26.06 g/t mined in the previous year.

In August, the company started sinking an internal 250 m shaft (winze) from the sixth to the tenth level at 500 m depth in the mine, to recover a high-grade ore zone. As of December 31, 1985, reserves at Salmita were 58 060 t grading 33.26 of gold per t, sufficient for one year of production.

Type:	Underground
Location:	256 km northeast of Yellowknife
Product:	Gold, silver
Tonnes Milled:	64 535 t
Reserves:	58 060 t (Dec. 31, 1985)
Reserve Grade:	33.26 g/t gold
Employees:	90

Nanisivik Mines Ltd.

Nanisivik Mines Ltd. (f), controlled by *Mineral Resources International Limited (MRI)*, is located 700 km north of the Arctic Circle, near Arctic Bay, Baffin Island. In 1985, the mill at the mine processed 1 950 tpd or 692 535 t of ore to yield 5 144 t of lead, 60 956 t of zinc and 23 512 kg of silver, all contained in concentrate. During the year, Nanisivik conducted a major exploration program in search for satellite ore zones, which could extend the life of the mine.

Type:	Underground
Location:	27 km east of Arctic Bay, Baffin Island
Product:	Zinc, lead, silver
Mill Capacity:	1 800 tpd
Tonnes Milled:	692 535 t (1 950 tpd)
Reserves:	3.15 million t (Jan. 31, 1985)
Reserve Grade:	9.5% zinc, 0.5% lead, silver is unspecified
Employees:	194

Pine Point Mines Limited

The Pine Point Mine (b) property covers the eastern portion of a Mississippi Valley-type zinc-lead district on the south side of Great Slave Lake. To date, some 87 deposits have been defined at Pine Point of which some 39 have been or are being mined. In 1985, Pine Point milled 2 137 298 t of ore to produce 56 174 t of lead and 161 379 t of zinc contained in 347 800 t of concentrate.

In December, the company announced revised production plans for 1986 and 1987 to maximize production rates from the most economic sources of ore available and to run the mill at full capacity. Also the overburden strip ratio will be reduced. All of these measures are being taken because of unanticipated ongoing low zinc and lead prices. Maximum milling rates will be used to reduce unit production costs and total fixed costs.

In 1985, 1.8 million t of ore was found on the property, including 0.4 million t in a new high grade deposit. However, on December 31, 1985 measured and indicated reserves were cut from 21.8 million t to 14.3 million t, the latter grading 6.3 percent zinc and 4.3 percent lead. During 1986 and 1987, approximately 4.7 million t of the highest grade ore, grading 8.5 percent zinc and 3.9 percent lead will be mined.

Beyond 1987, the continuing operation of the mine will depend in large measure on an improvement in the price for zinc and lead. Currently, the life of the mine beyond mid-1987 is uncertain.

Type:	Principally open pit with one underground mine
Location:	Pine Point
Product:	Zinc, lead
Mill Capacity:	9 100 tpd
Tonnes Milled:	2 137 298 t
Reserves:	14.3 million t (Dec. 31, 1985)
Reserve Grade:	6.3% zinc and 4.3% lead
Employees:	571

Royex Gold Mining Corporation-Shear Lake Mine

The company's Shear Lake gold mine (h) came on stream in March, 1984, and in mid-1984, all production from the company's B-Zone Mine, 5 km to the south was halted. At the end of August, 1985, the Shear Lake Mine was closed because operations were unprofitable. During the year, the mill processed 82 055 t to produce 407 kg of gold and 34.5 kg of silver. Reserves calculated to March, 1985 and based on five veins were set at 953 000 t grading 7.20 g of gold per t. The B-Zone Mine (Cullaton Lake) has reserves of 81 000 t grading 16.8 g of gold per t.

Type:	Underground
Location:	Cullaton Lake area, 370 km south of Baker Lake
Product:	Gold, silver
Mill Capacity:	363 tpd
Tonnes Milled:	82 055 t
Reserves:	953 000 t (March, 1985)
Reserve Grade:	7.20 g/t gold
Employees:	126 during early 1985

Terra Mines Ltd.

Terra Mines Ltd. closed the last of its three silver mines in the Camsell River area (d) on March 31, 1985. The Silver Bear Mine, after 18 years of production, was no longer profitable because of low silver prices. During the first quarter of 1985, the Silver Bear Mine produced 5 791 t of ore to yield 6 746 kg of silver in concentrate.

Type:	Underground
Location:	Camsell River area, 15 km south of Great Bear Lake
Product:	Silver
Mill Capacity:	364 tpd
Tonnes Milled:	5 791 t (first quarter 1985)
Reserves:	not available
Employees:	24

Figure 1
Mineral Exploration Expenditures
Northwest Territories

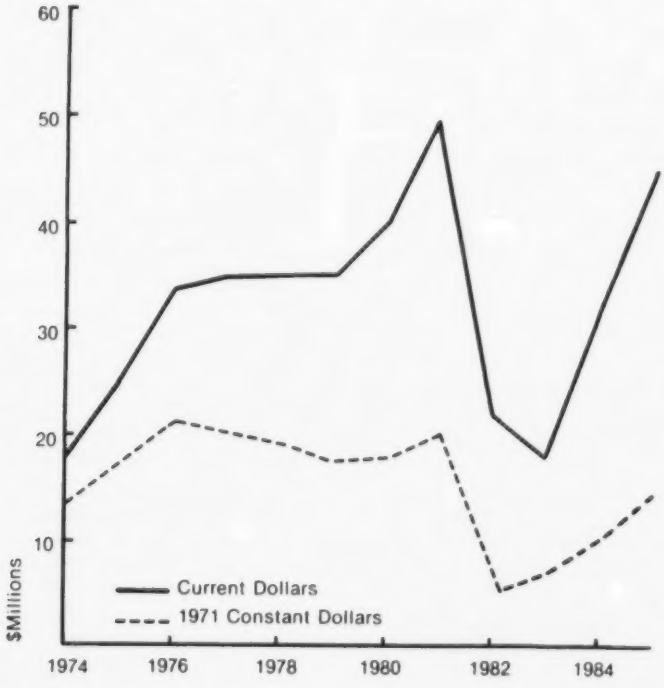


Table 2
Claims Staked in Northwest Territories, 1984 and 1985

Mining District	1985 Claims Recorded	1985 Area (Thousand Hectares)	1984 Claims Recorded	1984 Area (Thousand Hectares)
Arctic and Hudson Bay	64	50.70	81	48.9
Mackenzie	392	242.34	395	168.85
Nahanni	3	1.84	12	1.3
TOTAL	459	294.88	488	219.05

Mineral Exploration

Exploration and development expenditures in the Northwest Territories increased in 1985 to an estimated $45 million from about $40 million in 1984. More than half of the expenditures were directed to gold properties in the Slave structural province in the District of Mackenzie. About ten percent of total expenditures was represented by gold exploration in the District of Keewatin. Some 94 gold exploration projects were conducted with 79 in Slave Province, 5 in the Nahanni and 10 in the District of Keewatin. Ten projects were directed to uranium exploration and four projects to silver exploration. Out of a total of 136 projects in the territories, thirty-four involved diamond drilling and three involved underground development.

Development

Terra Mines Ltd.'s 1985 program at its Bullmoose Lake gold property (5) included underground development, surface and underground drilling and the construction of an airstrip. A 68 tpd pilot mill will be moved onto the property in early 1986 and 61 000 t of stockpiled ore will be processed as a pilot scale test. Upon successful completion of the test, Terra Mines plans to place the property into production in 1987, at 180 tpd, eventually building up to a mining rate of 540 tpd.

Highwood Resources Ltd. completed a large part of the work required for a feasibility study of its Thor Lake beryllium-rare earth metals property (39). The company drove a 490 m long decline to a depth of more than 80 m into the deposit after bringing in heavy equipment and supplies over a 105 km winter road constructed from Yellowknife. The metallurgical

results from large bulk samples will be used for a feasibility study leading to a production decision. The T Zone contains 1.63 million t grading 0.85 percent beryllium oxide and 431 000 t grading 0.2 percent yttrium oxide. South of the T Zone is a much larger area of mineralization called the Lake Zone with 63 million t grading 0.03 percent tantalum, 0.4 percent niobium (columbium) and 1.7 percent combined rare earth metals.

Treminco Resources Ltd. began driving a decline on its Tom property, just south of Prosperous Lake (4), to develop existing gold reserves for initial mining early in 1986. The company expects to mine at a rate of 2 700 t of ore per month from proven reserves which total 13 600 t.

Gold

Gold Exploration in Slave Structural Province

Aber Resources Ltd. in a joint venture with *Bow Valley Industries Ltd.* conducted geophysical and geological surveys over a number of iron formations on the BARB and FIN claims in the Contwoyto Lake area (g) near the Lupin Mine. In the same area, *Aber Resources Ltd.* and *Highwood Resources Ltd.* optioned approximately 6 000 ha of roughly 12 000 ha of the ground aquired by the Cominco-Cogema Joint Venture. Results of an airborne EM survey conducted by the latter companies over this ground will be followed up in 1986.

Mapping, geophysics and prospecting were conducted on *Aber Resources Ltd.'s* A.P. claims at Cameron River (4), 64 km northeast of Yellowknife, and a target area was found. On the BLACKRIDGE claim, in the Hood River area (13), the company conducted VLF-EM and magnetometer surveys. Drilling on the claim intersected some erratic gold mineralization.

The *Back River Joint Venture* drilled targets on Prospecting Permit 973 near George Lake (11) and conducted work on their main block of 15 prospecting permits adjoining permit 973.

Blackridge Gold Ltd. conducted work around a small gold deposit on the MQ 1 claim at the south and of Gordon Lake (4) and as well as on the AUR, JAL and MCC claims in the surrounding area.

Bow Valley Industries Ltd. in joint venture with *Aber Resources Ltd.* flew an airborne IMPUT EM and magnetometer survey over its major land position surrounding Echo Bay's Lupin Mine(g). The bulk of the area is joint venture ground held by *Aber Resources Ltd., Great Bear Development Corp.* and *Viscount Resources Ltd.* Numerous line grids were set up and geological mapping, EM and magnetometer surveys and drilling were carried out.

Brinco Limited under an agreement with *Consort Energy Corp.* and *Roxwell Gold Mines Ltd.* drilled EM conductors on the WEST claims (g) near the Lupin Mine.

Canuc Resources Inc. prepared a calculation of proven and probable resources on its Arcadia property (40) based on 1985 drilling conducted by *Echo Bay Mines Ltd.* Proven resources amount to 668 595 t grading 7.2 g of gold per t and probable resources amount to 91 626 t at 8.6 g of gold per t.

Comaplex Resources International Ltd., through Wollex (a division of Comaplex) explored the CHAL, EDE and CDC claims in the Indin Lake area (8).

Cominco Ltd. conducted airborne and ground EM and magnetometer surveys in the Contwoyto Lake area (g) in joint venture with *Cogema Canada Limited.* Cominco also explored the BUGOW claims at Russell Lake (3) by magnetometer and geological surveys and by diamond drilling. In the Courageous Lake area (e), Cominco in a joint venture with *Giant Yellowknife Mines Ltd.* drilled three holes on the BS claims, acquired from *Roxwell Gold Mines Limited.* In the Indin Lake area (8), the joint venture explored the BON claim.

In the Back River area (10), *Cominco Ltd.* explored the BEE and IM claims and three prospecting permits by geological mapping, magnetometer, VLF-EM and geochemical surveys.

Corolla Resources Ltd. completed soil and rock geochemistry surveys and a detailed VLF-EM survey over its STORM, PAN and CALM claims in the Consolidation Lake area (5).

Cove Energy Corporation drilled a geochemical, EM and magnetometer anomaly on its TANIA (Webb Lake) property (4). Gold bearing veins occur on the property.

Cruiser Minerals Ltd. completed a magnetometer survey on its MQ gold property near Gordon Lake (4).

Delaware Resources Corp. flew an airborne EM survey over its claims in the Indin Lake - Wijinnedi Lake area (8). *Manson Creek Resources Ltd.* also flew an airborne EM survey over part of the DAVE claim block (8).

Work by *Echo Bay Mines Ltd.* on the KIM claims at Lex Lake (8) in the Indin Lake belt included drilling 38 holes to provide ore definition in the Main Zone. The company acted as operator of a joint venture with *Petromet Resources Limited* and *Comaplex Resources International Ltd.* The gold zone has been expanded to 750 m along strike and to a depth of 90 m. The CASS showing, 3 km to the southwest of the Main Zone, is part of a series of gold occurrences.

Echo Bay Mines Ltd. conducted helicopter-borne EM and magnetometer surveys over claims in the Itchen-Contwoyto Lake area (9). Mapping, geophysics, trenching and drilling were carried out on the RUSH, CUB and F claims (9). Around Bathurst Inlet, Echo Bay explored the HEN claims and drilled the HUNT claims (12).

In the Indin Lake gold belt (8), *Frontier Gold Mines Ltd.* undertook preliminary exploration on its SANDRA and CATHY claims.

Genesis Resources Corp. mapped the JOON property (5) near Bullmoose Lake. EM and geochemical surveys detected a number of anomalous zones.

Giant Bay Resources Ltd. resumed exploration of its gold prospects at Knight Bay, Gordon Lake (4). Work included drilling of fourteen holes in four zones and geophysical surveys. The company announced that drill-indicated resources for the No. 1 zone on the property are 634 000 t grading 5.14 g of gold per t to the 150 m level. Since much of the zone is near the surface, it is likely that future mining would be by open pit to a 60 m depth. To this depth resources have been calculated as 280 275 t grading 4.53 g of gold per t. Two high grade gold zones called the T-11 and Wooferine were discovered in 1985 about 1.5 km north of the No. 1 Zone and five drill holes yielded encouraging results. In 1986, *Giant Bay Resources Ltd.* will be driving a 490 m long decline on the property and both surface and underground drilling are proposed.

Giant Yellowknife Mines Ltd. announced that ore values were obtained by drilling the RED claims, about 3 km north of the Salmita Mine (e) in the Courageous Lake - MacKay Lake volcanic belt. The company will resume drilling in 1986 and explore the TMK claims in the northern part of the belt. Also, three of six drill holdes put down within 300 m of the present workings of the Salmita Mine encountered significiant gold values.

Giant Yellowknife Mines Ltd. also drilled near the Crestaurum Mine (c) in the Yellowknife area. The company conducted reconnaissance exploration work on the KA1 claim at Bridge Lake (6), on the ALGOOD claims at Regan Lake (10) and the TREE claims near Point Lake (9).

Golden Marlin Mines Ltd. explored the MARLIN claims in Yellowknife Bay (c). Work included an IP survey, an airborne magnetometer and EM survey and a waterborn seismic survey.

Golden Rule Resources Ltd. flew an EM survey over its claims in the Indin Lake area (8).

Halferdahl and Associates Ltd. on behalf of an Edmonton - based syndicate, explored the PRO claim group in the Walsh and Prosperous lakes area (4), by geological and geochemical surveys.

Hecla Mining Company of Canada Ltd. conducted an EM and magnetometer survey over the JOHN, SHIN and DLER claims (g), in the Contwoyto Lake area. Ground geophysics and geological mapping are proposed for 1986.

Hidden Lake Gold Mines Ltd. conducted an airborne EM and magnetometer survey over its GOLD claim in the Contwoyto Lake region (g).

Walt Humphries and Associates conducted some exploration work on old showings on the WAL, TING and EQUINOX claims in the Walsh Lake area (4).

Lightning Minerals Inc. acquired the TT gold (3) property from *Terra Mines Ltd.* Terra completed a program of trenching and 2 286 m of drilling on the property.

Noranda Inc. announced that a significant new gold deposit was tested during 1984 in the Matthews Lake - Courageous Lake area under the company's Tundra Project (e). Work during 1985 was conducted on the BERTHA and FAT claims. Also magnetometer and EM surveys were conducted over a grid covering the CAROL 1 and 2 claims and part of the FAT, STOUT and TALL claims.

Noranda Exploration Company, Limited performed geological reconnaissance work over several claim blocks in the Beaulieu River, Detour and Victory lakes areas (4). In the Clan Lake area (5), north of Yellowknife, Noranda prospected and conducted reconnaissance work on the BOSS claims. Noranda also staked and prospected in the Russell and Slemon lakes area (3).

In the Chalco Lake area, near Indin Lake (8), Noranda carried out geophysical surveys and mapping on the STEAL and BAT claims optioned from *Petromet Resources Ltd.* Noranda also explored the BETAM and BRINK claims between Indin and Damoti lakes (8).

In the Point Lake - Itchen Lake area (9), Noranda staked and prospected the KES, KAR and MAX claims.

Placer Development Limited explored several claims in or near the Courageous Lake volcanic belt (e), including the COU, AL, MIST and FOG claims. In the Indin Lake volcanic belt (8), Placer explored the OTI and SPAN claim blocks, which were optioned from Petromet Resources Limited and Comaplex Resources, Inc. Several gold showings were covered by magnetometer and EM surveys.

Ryan Energy Corp. optioned the WT claims (4) near Yellowknife from *Cameron Holdings Ltd.* and excavated some 30 trenches.

Silver Hart Mines Ltd. explored claims near Pistol Lake (13) in an agreement with *Gold Fields Mining Corporation*, together with claims owned by the company. An aggregate of 4 876 m of diamond drilling was conducted in 1985. The drilling yielded encouraging gold-bearing intersections.

Suncor Inc., in joint venture with *Treasure Island Resources Corporation*, explored the latter's DAN gold property on Spider Lake (8) by an airborne EM and magnetometer survey and by excavating two trenches on Treasure Island. In the nearby Laurie Lake area (8), they explored the LONG and PEG LEG 1 claims by EM and magnetometer surveys on three grids, and by rock sampling.

Terra Mines Ltd.'s 1985 program at its Bullmoose Lake gold property (5) included underground development, surface and underground diamond drilling and some geological surveying. The airstrip to the north of the mine was extended to accomodate larger aircraft.

Gold Exploration in the District of Keewatin

Aberford Resources Ltd. (now *Abermin Corporation*) explored its five new exploration permits south of Yathkyed Lake (16) in search of lateral extensions of gold-bearing sulphide zones detected last year.

Borealis Exploration Limited acquired a prospecting permit southwest of the Ferguson River (18). The company worked on a gold showing on claims on the southern edge of the prospecting permit. The showing, was discovered and trenched by *Hudson Bay Mining and Smelting Co., Ltd.* in the late 1940's. It consists of gold-bearing quartz-chalcopyrite veins in sheared andesite. Work on the property will continue and drilling is planned during the 1985/86 winter season and in early 1986.

Canadian Nickel Company Limited worked on its prospecting permits northwest of Whale Cove (19) on Hudson Bay. In May, geophysical surveys were conducted on a gold showing northwest of the airstrip at Whale Cove.

Comaplex Resources International Ltd. prospected and conducted limited geophysical work on its claims east of Judge Sissons Lake (15). The company also prospected on its permits north of Whitehalls Lake (14) and northwest of Tehek Lake (14).

Gold Exploration in Nahanni District

Most of the mineral exploration in Nahanni District during 1985 was for placer gold. E. Barnes operated a small sluice box on Borden and Bennett creeks (2) and several small gold nuggets were found. Prospectors M. and P. Jones prospected between Spruce and Jack Pine lakes (2), but no gold was found. Prospector E. Linberg searched for gold and tungsten around the headwaters of the Brokenshell River (1).

Gold Exploration in the Arctic Region

Borealis Exploration Limited conducted some exploration work for gold on its prospecting permits on the Melville Peninsula (20).

Uranium

CEGB Exploration (Canada) Ltd. explored its prospecting permits in the Great Bear Lake - Dumas Lake area (34) by prospecting, geological mapping and soil sampling. This was the only reported work conducted during 1985 in the Bear Province.

PNC Exploration (Canada) Ltd. drilled fifteen holes on the DVB claims near Dunkel Lake (31) on the east side of the Dubawnt basin. A winter geophysical program, consisting of gradiometer and various types of EM surveys, was conducted on prospecting permits 1071 and 1072 (32) on the west side of Dunkel Lake, near Eyeberry Lake. PNC also drilled uranium targets near the Nonacho Group - basement unconformity between Salkeld Lake and southern Hjalmar Lake (33).

Urangesellschaft Canada Limited conducted geological, geophysical and geochemical surveys near its Lone Gull property (29). Deep holes were drilled into the Lone Gull deposit to determine the down-dip extent of the mineralization. Also, three anomalous areas and two new showings that were discovered in 1984 were drilled.

Base Metals

Asamera Inc. inspected the surface and underground workings of the Prairie Creek lead-zinc-silver mine (27) of *Cadillac Explorations Limited* and *Procan Exploration Company Ltd.* Cadillac's 60 percent interest in the mine was up for sale.

Cominco Ltd. continued to define the limits of its Polaris deposit on Little Cornwallis Island (i) by drilling. Similar drilling in 1984 increased the total measured and indicated reserves of the mine by 3.1 million t or 18 percent of total reserves.

Highwood Resources Ltd. staked cobalt-nickel arsenide deposits on Blanchet Island (25) on the east arm of Great Slave Lake.

Nanisivik Mines Ltd. conducted a major exploration program to drill test satellite sulphide zones on the Nanisivik Mine's mineral leases (f) in northern Baffin Island. Geophysical surveys on claims staked in 1984, west of the Nanisivik Mine, outlined EM conductive zones.

Panarctic Oils Ltd. drilled several holes to test the copper-silver potential of selected targets on its prospecting permits that cover much of the Minto Arch of Victoria Island (21).

Petro-Canada drill tested a fault-controlled silver-barite-galena showing in Adams Sound Formation quartzites at Elwin Inlet, northern Baffin Island (22).

Pine Point Mines Limited continued to explore its mine property (b) on the south side of Great Slave Lake in search of Mississippi Valley-type ore deposits. During the year 1.8 million t of ore were found, including 0.4 million t in one new high-grade deposit with a low strip ratio. However, after accounting for new ore located in 1985, reserves were cut by 35 per cent from 21.8 million t at 1984 year-end to 14.3 million t at 1985 year end. The company also completed three drill holes on the JMBS claims west of the Buffalo River (26).

Other Commodities

Erex International Ltd. trenched on its BET 1-2 claims on Drever Lake (4) to the northeast of Blatchford Lake as part of its lithium exploration effort. In July, *Equinox Resources Ltd.* acquired from *Erex International Ltd.* up to 88 percent interest in 68 mineral claims in eleven separate groups, east of Yellowknife. During 1975-1979, *Canadian Superior Exploration Ltd.* outlined resources in pegmatites amounting to 37.6 million t grading 1.37 percent lithium oxide (LiO_2), mainly as spodumene pegmatites.

Highwood Resources Ltd. drove a 500 m long decline on its Thor Lake beryllium-yttrium-tantalum-columbium-rare earth metals property (39). Large bulk samples were removed and shipped for metallurgical testing as part of a major feasibility study.

Selco Inc. conducted heavy mineral stream sampling along the Mackenzie Valley (38) and examined several diatremes in the Mackenzie Mountains (36, 37) in search of diamonds. In 1981, *Superior Oil Ltd.* and *Falconbridge Limited* found several microscopic diamonds in concentrates taken from the Mountain Diatreme in the Mackenzie Mountains. Also, kimberlite indicator minerals have been found in the Blackwater River area, east of the Mackenzie River.

J.S. Vincent, carried out trenching on his BIN, LENS, MUT and HID (5) claims in the Mystery Lake area east of Yellowknife, in exploration for tantalum and tin.

Tantalum Mining Corporation of Canada Ltd. continued a lithogeochemical study on its TCS and COVE claims in the Thompson Lake area (4). Pegmatites in this area contain columbium, tantalum and tin minerals.

MINERAL EXPLORATION AND MINING NORTHWEST TERRITORIES – 1985

LEGEND

△a Producing Mines

a Canada Tungsten Mining Co. Ltd., W, Cu
b Pine Point Mines Ltd., Pb, Zn
c Giant Yellowknife Mines Ltd., Au, Ag
Cominco Ltd.(Con Mine) Au, Ag
d Terra Mines Ltd., Ag, Pb, Zn, Cu
e Giant Yellowknife Mines Ltd. (Salmita Mine) Au, Ag
f Nanisivik Mines Ltd., Pb, Zn, Ag
g Echo Bay Mines Ltd.,(Lupin Mine), Au, Ag
h Cullaton Lake Gold Mines Ltd., Au, Ag
i Cominco Ltd.,(Polaris Mine), Pb, Zn

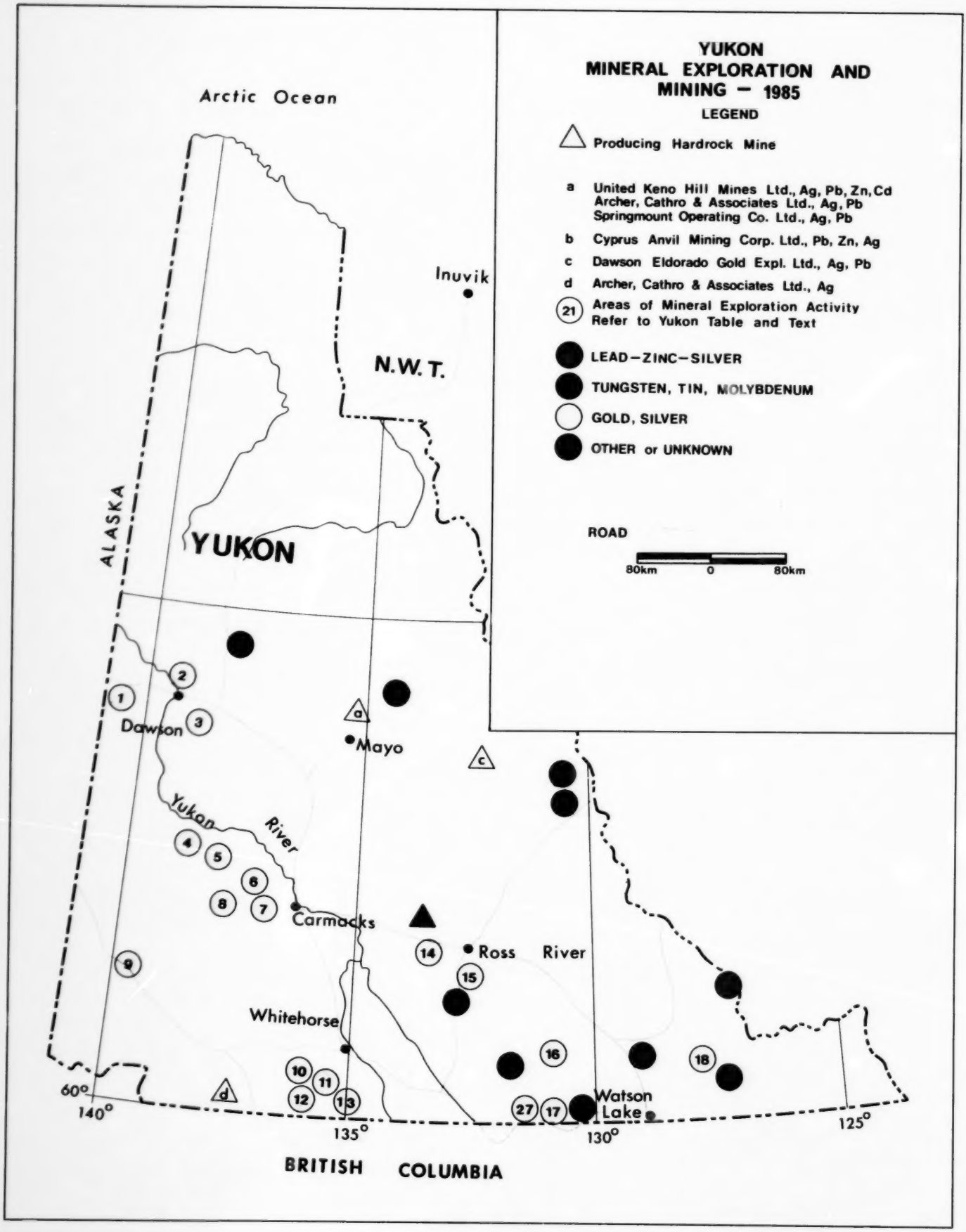
100km 0 100km

Road

(12) Areas of Exploration Activity Refer to N.W.T. Table and Text

● URANIUM
○ GOLD, SILVER
● ZINC, LEAD, COPPER
● TUNGSTEN
○ LITHIUM, DIAMOND, IRON, BARITE, BERYLLIUM, SOAPSTONE

ALASKA
YUKON
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
QUEBEC
NORTHWEST TERRITORIES
GREENLAND
Arctic Ocean
Hudson Bay
BANKS ISLAND
VICTORIA ISLAND
BAFFIN ISLAND
Arctic Circle
Inuvik
Norman Wells
Mackenzie River
Fort Simpson
Yellowknife
Fort Smith
Pine Point
Coppermine
Cambridge Bay
Resolute
Baker Lake


YUKON
MINERAL EXPLORATION AND
MINING – 1985
LEGEND
Producing Hardrock Mine
a United Keno Hill Mines Ltd., Ag, Pb, Zn, Cd
Archer, Cathro & Associates Ltd., Ag, Pb
Springmount Operating Co. Ltd., Ag, Pb
b Cyprus Anvil Mining Corp. Ltd., Pb, Zn, Ag
c Dawson Eldorado Gold Expl. Ltd., Ag, Pb
d Archer, Cathro & Associates Ltd., Ag
21 Areas of Mineral Exploration Activity
Refer to Yukon Table and Text
LEAD–ZINC–SILVER
TUNGSTEN, TIN, MOLYBDENUM
GOLD, SILVER
OTHER or UNKNOWN
ROAD
80km 0 80km
Arctic Ocean
Inuvik
N.W.T.
ALASKA
YUKON
Dawson
Mayo
Yukon River
Carmacks
Ross River
Whitehorse
Watson Lake
60°
140°
135°
130°
125°
BRITISH COLUMBIA

Yukon

Mineral Production

Mineral shipments in the Yukon during the calendar year 1985 were valued at $57.9 million compared with $70.1 million in 1984. Precious metals production again dominated mineral production value with gold and silver accounting for $55.8 million or 96.3 per cent of total production value. The leading sector of the Yukon mining economy was the Yukon placer gold mining industry with a reported output according to royalty records of 3 048 kg of gold (98 000 troy ounces). An additional 50 kg of gold was sold to jewellery manufacturers in the Yukon.

The Yukon's only year-round lode mine, *United Keno Hill Mines Limited*, at Elsa (a) produced 39 585 kg of silver from its twelve mines during the year. Also, three small-scale seasonal silver mine operations contributed to the Yukon's silver output. In the Keno Hill-Galena Hill mining area, dominated by *United Keno Hill Mines Limited*, both *Archer, Cathro and Associates (1981) Limited* and *Springmount Operating Company Ltd.* mined small tonnages of silver ore for the third consecutive year. In the Rogue River area (c), *Dawson Eldorado Mines Ltd.* also operated its Plata-Inca silver mine for the third consecutive year.

Cyprus Anvil Mining Corporations' mine at Faro (b) did not operate during 1985. In November 1985, the property was sold to *Curragh Resources Corporation* and commencement of zinc and lead concentrate production is expected in June 1986. The sale of the property followed negotiations among *Dome Petroleum Limited*, the vendor with majority interest in Cyprus Anvil, *Curragh Resources Corporation*, the federal and territorial governments and other interest groups.

The Yukon accounted for 3.6 percent of the gold, 3.7 percent of the silver and 0.6 percent of the lead produced in Canada in 1985. The Yukon's mineral production value represented 0.7 percent of Canada's metallic mineral production in 1985 which remained the same as in 1984.

The Yukon lode (hard rock) mining industry employed 442 persons on a year-round basis including 37 at the Mount Skukum gold mine which was under development at the close of the year. The Yukon placer gold mining industry directly employed an estimated 500 persons at some 150 to 175 mine operations on a seasonal basis.

Table 3
Mineral Production of Operating Mines
Yukon Territories, 1984 and 1985

Company, Mine and Commodity	1984 t	1984 kg	1985 t	1985 kg
Archer, Cathro and Associates (1981) Limited				
Keno Hill area mines				
silver		1 554.8		2 787.9
lead	72.6		229.14	
Dalton Post area mines				
gold		—		0.24
silver		36.5		39.3
lead	0.84		0.96	
zinc	0.16		0.28	
Curragh Resources Corporation				
Faro Mine				
lead	—		—	
zinc	—		—	
silver		—		—
Dawson Eldorado Mines Ltd.				
Plata Mine				
silver		9 330		3 583
lead	1 360.8		589.6	
Springmount Operating Company Ltd.				
Keno Hill mines				
silver		5 845		550.9
lead	180		17.34	
United Keno Hill Mines Limited				
lead	879.5		975	
zinc	98.0			
silver		32 109		39 585

Sources:

Department of Indian Affairs and Northern Development. These production figures are those reported by the mines as production and may not match Statistics Canada production figures which are based on metals sold or shipped.

Mines

United Keno Hill Mines Limited

The company's mining operations at twelve mines in the Elsa area (a) produced 67 864 t of ore in 1985. The central mill turned out 39 585 kg of silver and 975 t of lead contained in concentrate. Under the pressure of low silver prices, the company employed fewer people and produced more ore and silver than during the previous year.

Type:	Underground mines and one open pit mine
Location:	Keno Hill-Galena Hill area, near Elsa
Product:	Silver-bearing lead concentrate
Mill Capacity:	450 tpd
Tonnes Milled:	67 864 t
Reserves:	164 924 t (Dec. 31, 1985)
Reserve Grade:	853.7 g silver per t, 3.2% lead
Employees:	176

Seasonal Small Lode Silver Mining Operations

Archer, Cathro and Associates (1981) Limited

The company mined the high-grade Shamrock vein during part of 1985, on a lease from *United Keno Hill Mines Limited* in the Keno Hill area (a). Approximately 313 t of galena ore grading 8 914 g of silver per t was mined from four crown pillars near the surface over old workings.

More a sampling operation than a mining operation, *Archer, Cathro and Associates (1981) Limited* also mined 11.5 t of silver-gold-lead-zinc-copper mineralization from *The Golden Shamrock Resource Corp.*'s WIL 1-8 (d) claims near Dalton Post. The material was shipped to Cominco's smelter at Trail, B.C.

Dawson Eldorado Mines Ltd.

The company, (formerly named *Dawson Eldorado Gold Explorations Ltd.*) enjoyed an excellent third year of silver production for the Plata-Inca Mine, 176 km northwest of Ross River (c). The company made three shipments of ore during the year totalling 907 t with an average grade of 3 950 g per t silver and 65 percent lead.

Springmount Operating Company Ltd.

Springmount Operating Company Ltd. mined 68 t of high-grade silver-lead - zinc ore from the Mt. Keno Mine in the Keno Hill area (a).

Placer Mining

Placer gold production, as represented by royalty records under the Yukon Placer Mining Act, remained at a high level during 1985, despite prevailing low gold prices. Some 150 to 175 placer operations produced 3 098 kg of gold compared with 2 946 kg reported in 1984.

Most of the mining operations are in the traditional mining areas including the Klondike, Sixty Mile, Mayo, Clear Creek and Kluane areas. Most of the gold produced in the Yukon was from small caterpillar tractor and sluice box operations that work from May to freeze up in the fall.

Three underground placer mines were worked in the frozen gravel in the Klondike area, near Dawson, during the winter of 1984-1985. *White Channel Underground Mining Ltd.* (1) and *King Solomon Mines Ltd.* (3) both mined the White Channel terrace gravel deposits. The third underground operator, *Klondike Underground Mining Ltd.*, mined the Jackson Hill (1) property, also in the Klondike area.

Staking activity related to placer mining was down in 1985. There were 1103 new claims and 150 new leases staked to December 31, 1985 compared with 1 843 new claims and 202 new leases staked to year end 1984. There were 14 493 placer claims, 240 placer leases and 6 dredging leases in good standing at the close of 1985.

Development

Total Erickson Resources Ltd. (formerly *Erickson Gold Mines Ltd.*), the operator of the Mount Skukum gold mine project, in joint venture with *AGIP Canada Ltd.*, proceeded with development of the 270 tpd mill and its Cirque (Main) vein deposit (11). The Cirque gold vein deposit was discovered in 1981. Construction at year-end was proceeding smoothly toward a March, 1986 start up. Measured reserves of the Cirque Zone amount to 164 000 t averaging 20.5 g of

gold per t, fully diluted. The mine will employ some 60 to 75 persons and will cost over $5 million. The project employed an average of 37 persons in 1985.

At year end 1985, *Curragh Resources Corporation* was starting waste rock (overburden) removal at the Faro Mine (b) as preproduction development. The work force of 100 will gradually increase to some 450 permanent employees.

On the Ketza River gold property (15), 80 km south of Ross River, *Canamax Resources Inc.* and *Pacific Trans-Ocean Resources Ltd.* continued a major exploration and development program. In 1985, Canamax completed some 7 000 m of diamond drilling in sixty holes and drove a 465 m adit underground above the Ridge Zone into the Peel Zone. Bulk samping of the Ridge Zone was conducted for metallurgical testing and a feasibility study. At the end of the previous year (1984), Canamax estimated reserves at 460 000 t grading 8.7 g of gold per t including a higher grade section of 185 000 t grading 13.37 g of gold per t. If the company goes into production in 1987, Ketza River will be a small mine of about 400 tpd. Also the majority of the underground development work will be completed during the exploration phase.

In the Elsa mine area (a), *United Keno Hill Mines Ltd.* continued a major exploration development program at a cost of $4.7 million in 1985. A total of 8 997 m of rotary percussion drill holes were completed and adits were advanced on the Silver King, Lucky Queen and Bellekeno properties. Some 2 577 m of drifting and crosscutting were completed to explore the mineralized vein system.

Table 4
Quartz Claims Recorded in Yukon, 1984 and 1985

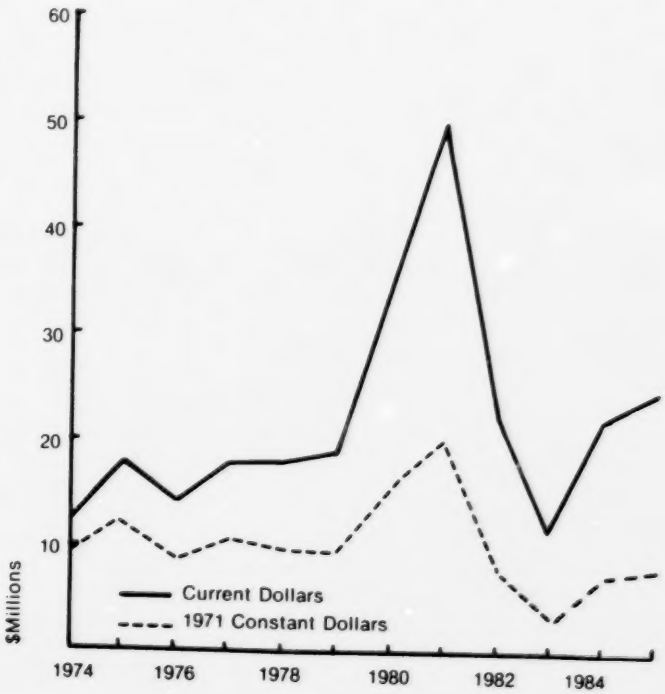
District	1985 Claims Recorded	1984 Claims Recorded
Dawson	386	2 823
Mayo	75	298
Watson Lake	1 323	1 975
Whitehorse	4 035	3 056
TOTAL	5 819	8 152

Mineral Exploration

Mineral exploration expenditures in the Yukon were estimated at $25 million during 1985 compared with about $22 million during 1984. As in the previous year, most of the exploration activity was for precious metals. The most active areas were the Wheaton River area (11), Rancheria area (17), Ketza River area (15) and the Mount Nansen/Mount Freegold area (6, 7), all of which contain precious metals properties.

Quartz claims (hardrock claims) in good standing at year end 1985 amounted to 46 301, down from 47 475 at year-end 1984. During 1985, 5 097 new quartz claims were staked. Most of the claims were located in the aforementioned active exploration areas. In addition, 23 coal leases were in good standing.

Figure 2
Mineral Exploration Expenditures
Yukon Territory



Gold and Silver

The Yukon saw continuing exploration emphasis on small high-grade precious metals deposits in 1985. Encouraged by the continuing development of *Total Erickson Resources Ltd.*'s Mount Skukum gold mine in the Wheaton River area (11), a number of companies actively explored in the surrounding Wheaton River Valley-Mount Skukum-Montana Mountain area. Players in the Rancheria District, which straddles the Yukon - B.C. border, 80 km west of Watson Lake, continued the search for other mantos silver deposits similar to *Regional Resource Ltd.*'s Midway silver discovery. In the St. Cyr Range, 80 km south of Ross River, *Canamax Resources Inc.* continued exploration and development of the significant Ketza River gold property. The property will undoubtedly become the next new lode mine in the Yukon. In the Dawson Range, northwest of Carmacks, a number of companies were in active exploration of gold targets believed to hold potential for heap leach mining.

Archer, Cathro and Associates (1981) Limited under an agreement with *Casino Silver Mines Ltd.* conducted trenching and percussion drilling on *Teck Corporation*'s CASINO property (4). The property is well known for its large low-grade copper-molybdenum porphyry deposit. An oxidized portion of the deposit may be amenable to heap leaching for gold. Low-grade gold mineralization is widely distributed within the Casino subvolcanic porphyry complex. One zone on Carr Ridge is over 80 m wide and 300 m long and contains in excess of 0.75 g of gold per t. Archer, Cathro and Associates also conducted trenching and drilling on a property optioned in the Mount Freegold area (7). Gold grading 0.75 g to 2.09 g per t was intersected in seven zones to a depth of 60 m.

BP Canada Inc. financed a drill program which was conducted by *Sulpetro Limited* on the MEL (26) zinc-lead-barite property, east of Watson Lake. Ten holes totalling 1 010 m were drilled on the newly discovered Jeri Zone.

Carmac Resources Ltd. optioned the MOM claims in the Wheaton River area (11). Old dumps of material previously mined by *Yukon Antimony Corporation Limited* on the claims carry antimony, silver and gold values. A preliminary reconnaissance soil geochemistry survey yielded anomalous gold and silver values.

Claymore Resources Ltd. located four silver-bearing veins on its S 126 claim group in the Rancheria area (27) following a geochemical survey. The company conducted a geochemical survey and trenching during the summer.

Hayes Resources Inc. completed excavation of 47 trenches on its gold property at Sonora Gulch, northwest of Carmacks (5).

Hudson Bay Exploration and Development Company Limited completed a 2 000 m diamond drilling program to test for disseminated gold mineralization in Tertiary ash flows on the south side of the Tintina Trench, at Grew Creek (14), west of Ross River.

International Prism Exploration Ltd. reported good intersections of silver-lead-zinc mineralization in its drilling program on the Big Red Zone on the VAL claims near Kathleen Lakes (19). Step-out drilling was also carried out on the adjoining VERA claims. A new zone, the G-D, was discovered to the northeast of the Vera adit. Trenching was carried out on the Siltstone Zone (VAL claims). As of September 1985, reserves on the Kathleen Lakes property amounted to 1.4 million t with grades of 308 g per t silver and six percent combined lead and zinc. The Big Red Zone is reported to have indicated potential in excess of 62 000 kg of silver.

Island Mining and Explorations Co. Ltd. conducted some preliminary work on its 187 claims northwest of Bennett Lake (11).

Exploration activity by *Kerr Addison Mines Limited* consisted of trenching and sampling on the Mount Cockfield area (5). Also Kerr Addison optioned four properties from *AGIP Canada Ltd.* in the Wheaton River (11) area. On the Mount Skukum claims in the latter area, gold-bearing quartz rich zones were located, sampled and mapped during 1985. Kerr Addison plans to drill in the Mount Skukum area during 1986.

Logan Mines Ltd. staked an additional 48 claims and conducted exploration on its ROY claim block (28) near the N.W.T. border. The polymetallic sulphide mineralization on its property containing gold, silver, lead and zinc values was extended.

Noranda Exploration Company, Limited conducted VLF-EM, magnetometer and IP surveys on Sanfred

Resources Ltd.'s TAM claims (11), on Mount Anderson, in the Wheaton River area. A soil sample survey showed anomalous lead, gold, zinc and silver values.

Northern Horizon Resources Corporation and *Everest Resources Ltd.* conducted geological mapping, geochemistry, trenching and drilling on its 24 TUF claims (d) located 128 km southwest of Whitehorse.

Omni Resources Inc. of Vancouver announced the discovery of a new narrow gold-bearing vein on its Skukum Creek property the southeast face of Mt. Reid, southeast of the Mount Skukum gold mine (11). The vein, from 0.15 m to about 1 m wide, yielded high gold assay values. The company drilled the Rainbow and Road zones on the property.

Pak-Man Resources Inc. and 2001 Resource Industries Ltd. trenched three silver-lead veins on the WOLF claims (27) in the Rancheria area. A small drill program of five holes failed to intersect mineralization.

In November, *Silver Hart Mines Ltd.* let a contract to drive a 207 m long adit on the MIDNIGHT (CMC) property (27) in the Rancheria area. The objective of the work it to establish reserves on the silver property. The results of a 50 hole diamond drilling program was compiled and potential ore was estimated at 187 700 t. The TM-FM zone has a strike length of 60 m and the SM Zone with a similar strike length is parallel to the TM-FM vein.

United Keno Hill Mines Limited conducted preliminary geochemical and geophysical surveys on the former Klondike Silver property (27) in the Rancheria area, near the B.C.-Yukon border. Basic prospecting on the LUCKY vein, followed by diamond drilling, gave encouraging results.

Westmount Resources Ltd. conducted a program of geological mapping and surface sampling on its Chieftain Hill property (11) in the Wheaton River area. Gold and silver mineralization occurs in the vicinity of felsic and intermediate dikes, which cut epiclastic volcanics.

Zinc-Lead-Silver

Canamax Resources Inc. completed 5 468 m of diamond drilling in 37 holes on its wholly owned Mount Hundere property (22) north of Watson Lake. The program successfully extended the previously established geological reserves on the Main and East zones by adding 1.76 million t grading 14.5 percent zinc, 8.5 percent lead and 55.98 g per t silver. Total geological reserves on the property at year-end stood at 2.2 million t grading 14.1 percent zinc, 8.7 percent lead and 72 g per t silver. The new reserves are in three overlapping flat-lying zones situated directly south of the Main and East zones. All new zones are open to extension.

Dawson Eldorado Mines Ltd. uncovered a zone of oxidation 365 m down slope from its high grade A showing on the KIWI prospect (29), 96 km north of Dawson. The new showing has yielded high zinc, lead and silver values.

Table 5
Exploration - Northwest Territories

Location (1)	Company (2)	Property/Area (3)	Mineralization (4)
1	E. Linberg	Brokenshell River	Au
2	E Barnes	Borden Creek	Au
2	M. & P. Jones	Spruce Lake	Au
2	L. Shamanek	Clarke Lake	Au
3	Cominco	BUGOW	Au
3	Noranda	LEMON (Salmon Lake)	Au
3	Lightning/Terra	TT	Au
4	Blackridge	MQ-1 (Gordon Lake)	Au
4	Noranda	Beaulieu River	Au
4	Cruiser	MQ	Au
4	Giant Bay	MAHE (Gordon Lake)	Au
4	Goldrich/Treminco	TOM	Au
4	Halferdahl	PRO (Prosperous Lake)	Au
4	W. Humphries	Walsh Lake	Au
4	Ryan	WT	Au
4	Aber	AP	Au
4	Cove Energy	TANIA	Au
4	Equinox		Li
4	Tantalum Corp.	TCS, COVE	Ta
5	Terra	TA (Bullmoose Lake)	Au
5	Corolla	Consolation Lake	Au, W
5	Asamera	Clan, Sunset-Amacher lakes	Au
5	Noranda	Clan Lake	Au
5	Erex	BET	Li
5	Genesis	JOON	Au
5	J.S. Vincent	BIN, LENS, MUT	Ta, Sn
6	Giant Yellowknife	KA (Bridge Lake)	Au
7	Noranda	Indian Mountain Lake	Au
7	Asamera	Indian Mountain Lake	Au
8	Echo Bay	KIM	Au
8	Noranda	Indin Lake	Au
8	Aber	FUR, YUMS	Au
8	Comaplex	CHAL, EDE, CDC	Au
8	Delaware	CASS, DAVE	Au
8	Manson Creek	DAVE	Au
8	Golden Rule	Indin Lake	Au
8	Frontier	SANDRA, CATHY	Au
8	Placer	OTI, SPAN	Au
8	Suncor/Treasure Island	Spider Lake	Au
8	Suncor	Laurie Lake	Au
8	Suncor	Arseno Lake	Au
8	Cominco/Giant Yellowknife	BON	Au
9	Echo Bay	Itchen Lake	Au
9	Noranda	Point Lake - Itchen Lake	Au
9	Giant Yellowknife	TREE	Au
10	Gaint Yellowknife	ALGOOD (Regan Lake)	Au
10	Cominco	Back River	Au
10	Back River JV	Malley Rapids	Au
11	Back River JV	George Lake	Au
11	Echo Bay		Au
12	Echo Bay	HUNT, HEN	Au

Table 5 (continued)
Exploration - Northwest Territories

Location (1)	Company (2)	Property/Area (3)	Mineralization (4)
13	Silver Hart	FARN, KNUT	Au
13	Aber	BLACKRIDGE	Au
14	Comaplex	Tehek Lake	Au
14	Comaplex	Whitehills Lake	Au
15	Echo Bay	Long Lake	Au
15	Comaplex	Judge Sissons Lake	Au
16	Aberford	Yathkyed Lake	Au
17	Suncor	Lothrop Lake	Au
17	Suncor	Mountain Lake	Au
18	Borealis	Ferguson River	Au
19	Canadian Nickel	Whale Cove	Au
20	Borealis	Melville Pen.	Au
21	Panarctic	Minto Arch	Cu, Ag
22	Petro-Canada	Elwin Inlet	Ag, Ba, Pb
23	Petro-Canada	Baffin Island	Pb, Zn
24	Enexco	Rutledge Lake	Ni, Cu
25	Highwood	Blanchet Island	Co, Ni
26	Pine Point	JMBS	Pb, Zn
27	Asamera	Prairie Creek	Ag, Pb, Zn
28	Logan	ROY	Pb, Zn, Ag, Au
29	Urangesellschaft	LONE GULL	U
30	PNC Exploration	Marjorie Lake	U
31	PNC Exploration	DVB	U
32	PNC Exploration	Dunkel Lake	U
33	PNC Exploration	Salkeld Lake	U
34	CEGB Exploration	Dumas Lake	U
35	Amax	MACTUNG	U
36	Selco		Diamonds
37	Selco	Keele River	Diamonds
38	Selco		Diamonds
39	Highwood	Thor Lake	REE, Be
40	Canuc/Echo Bay	ARCADIA	Au
b	Pine Point	Pine Point	Pb, Zn
c	Asamera	Yellowknife	Au
c	Giant Yellowknife	Crestaurum Mine	Au
c	Golden Marlin	MARLIN	Au
c	Cominco	Niven Lake	Au
e	Noranda	FAT, BERTHA	Au
e	Cominco/Giant Yellowknife	Courageous Lake	Au
e	Placer	Courageous Lake	Au
f	Nanisivik	NANISIVIK	Pb, Zn
g	Cominco/Cogema	Contwoyto Lake	Au
g	Aber/Bow Valley	FIN	Au
g	Bow Valley	Contwoyto Lake	Au
g	Brinco	WEST	Au
g	Hecla	JOHN, SHIN, DLER	Au
g	Argonaut	WHY	Au
g	Hidden Lake	GOLD	Au
i	Cominco	POLARIS	Pb, Zn

Table 6
Exploration - Yukon Territory

Location (1)	Company (2)	Property/Area (3)	Mineralization (4)
1	Klondike Underground	Miller Creek	Placer Au
1	Noranda	LGC	Au
2	White Channel	Jackson Hill	Placer Au
3	King Solomon	King Solomon	Placer Au
3	Dawson Eldorado	Lone Star	Au
4	Nordak/Permian/Casino Silver	Casino	Au
4	Archer, Cathro/Chevron	Idaho Creek	Au
5	Archer, Cathro/Chevron	SELWYN	Au
5	Kerr Addison	Mount Cockfield	Au
5	Archer, Cathro/Chevron	NIT	Au
5	Hayes	Sonora Gulch	Au
6	Nordac	CASH	Au, Ag, Zn, Pb
6	Archer, Cathro/Chevron	NUCLEUS	Au
6	Nordac/Yukon Revenue	REVENUE	Au, Cu, W
6	Nordac/Permian	Rambler Hill	Au
6	Archer, Cathro/Chevron	ZIT	Au
6	Yukon Revenue	GOLDY	Au, Ag, Pb, Zn
7	Chevron/B.Y.G./Archer, Cathro	Mount Nansen	Au
7	Chevron/B.Y.G./Archer, Cathro	Brown-McDade	Au
8	Archer, Cathro/Chevron	MALONEY	Au
9	Noranda	Wade Creek	Au
10	Noranda	FACE	Au
10	Rockridge	BOTWAT	Au
11	Erickson/AGIP	Mount Skukum	Au
11	Barker Creek	FOUR F	Au, Zn, Pb
11	Barker Creek	NEW	Au, Ag
11	Tally-Ho/Euro/Permian	GOLD HILL	Au
11	Shakwak	CHARLIE	Au
11	Shakwak/AGIP	BEAR	Au
11	Island Mining		Au
11	Westmount	Chieftian Hill	Au, Ag
11	Kerr Addison/AGIP	Mount Skukum	Au
11	Carmac	MOM	Ag, Au, Sb
11	Tally-Ho	TALLY-HO	Au
11	Tally-Ho/Euro/Permian	Mount Wheaton	Au
11	Barker Creek	ERA	Au, Ag
11	Noranda	ILLIA, RYE	Au
11	Tally-Ho/Euro/Permian	Mount Stevens	Au
11	Shakwak/AGIP	ODD	Au
11	Noranda/Sanfred	Mount Anderson	Au, Ag, Pb
12	Shakwak	CHARLESTON	Au
12	Noranda	SCAR	Au, Ag, Sb
13	Shakwak	MONTANA	Au
14	Hudson Bay	Grew Creek	Au
15	Canamax	Ketza River	Au
15	Canamax	STUMP, HOEY	Ag, Pb
15	Ketza/Canamax/Pacific Trans-Ocean	BOOM, KON, OXO	Au
16	Shakwak	SOURCE	Ag, Pb
17	United Keno Hill	HOLLIDAY	Ag, Pb, Zn
18	Kidd Creek	CUZ	Au

Table 6 (continued)
Exploration - Yukon Territory

Location (1)	Company (2)	Property/Area (3)	Mineralization (4)
19	Canadian Nickel	BLENDE	Zn, Pb
19	International Prism	VAL	Ag, Pb, Zn
20	Cominco	NIDD	Pb, Zn, Ag
21	Comox	BAR	Pb, Zn
22	Canamax	HUNDERE	Zn, Pb, Ag
23	Canamax	HOT	W, Mo
24	Cominco	TAY	Pb, Zn
25	Yukon Barite	PETE, TEA	Ba
26	BP Canada	MEL	Zn, Pb, Ba
27	Claymore	S126	Ag, Pb
27	Pak-Man/2001 Resource	WOLF	Ag, Pb
27	Silver Hart	MIDNIGHT, CMC	Ag
27	United Keno Hill	LUCKY	Ag
28	Logan	ROY	Au, Ag, Bb, Ba
29	Dawson Eldorado	KIWI	Zn, Pb, Ag
a	United Keno Hill	Keno Hill	Ag
b	Curragh	Faro	Pb, Zn, Ag
d	Everest/Horizon KANE,	TUF	Ag, Pb, Zn

Footnotes for Tables 5 and 6

(1) Table location is made with reference to corresponding numbers on Yukon and Northwest Territories maps. Locations are approximate.

(2) Abbreviated name of the Company is used: Expl. (Exploration), Ltd./Lteé (Limited), JV (Joint Venture).

(3) Geographical areas are indicated by small print, whereas claims and groups are capitalized. Abbreviated words are: Peninsula (Pen), River (R), Lake (L).

(4) Metal(s) of primary importance defined by chemical symbols: copper (Cu), gold (Au), lead (Pb), tantalum (Ta), lithium (Li), asbestos (Asb), molybdenum (Mo), silver (Ag), barium (Ba), cobalt (Co), tin (Sn), iron (Fe), tungsten (W), niobium (Nb), berylium (Be), rare earth elements (REE), mercury (Hg), antimony (Sb) and uranium (U).

Appendix 1

Organizational Structure and Mandate

As of December 1986, the Minister and departmental officers responsible for the administration of mines and mineral resources in the Northwest Territories and the Yukon were:

Minister:	Bill McKnight
Deputy Minister:	B. Rawson
Associate Deputy Minister: (Northern Affairs):	J. Gerin
Director General, Northern Resources and Economic Development:	D. Wetherup
Director, Mining Management and Infrastructure:	Dr. J. Lazarovich
Chief, Mining Administration:	J.M. Hodgkinson
Acting Head, Mining Resources Section:	T.W. Caine
Evaluation Geologist:	vacant
Technical Information Officer:	P.T. Marion
Head, Mining Lands Section:	T.W. Dent
Head, Legislation:	P.M. Corrigan
Head, Royalties:	L.I. Alberti
Chief, Mineral Policy:	L. Guptill
Chief, Infrastructure:	W.G. Cleghorn

Address:

Department of Indian Affairs
and Northern Development
Les Terrasses de la Chaudière
OTTAWA, Ontario
K1A 0H4

Phone (Mining) (819) 997-0911

Northern Affairs Program

Yukon Region

Director General	J. Ganske
Director, Mineral Resources:	C. Ogilvy
Chief Geologist:	Dr. J.A. Morin
District Geologist:	J.G. Abbott
Placer Geologist:	S. Morrison
Staff Geologists:	D. Emond
	W. LeBarge
	T. Bremner
Map Sales and Core Librarian	R. McIntyre
Regional Manager, Mineral Rights:	B.R. Baxter
Mining Recorders:	M.A. Fish, Whitehorse
	R.H. Whittingham, Dawson
	R.G. Ronaghan, Mayo
	Y. Burkhard, Watson Lake
Regional Mining Engineer:	C.H. Macdonald
District Mining Engineer:	N. Prasad
Mine Rescue Superintendent:	N. Mainer
Environmental Technician:	D. Cormier
Chief Claim Inspector:	G. Gilbert
Mining Claim Inspectors:	L. Olynyk
	R. Whittingham

Address:

Department of Indian Affairs
and Northern Development
200 Range Road
WHITEHORSE, Yukon
Y1A 3V1

Phone (switchboard) (403) 668-5151

Northern Affairs Program

Northwest Territories Region

Director General:	Dr. A. MacPherson
Director, Minerals and Economic Analysis:	G. Patenaude
Chief Geologist:	Dr. W.A. Padgham
District Geologists:	Dr. W.A. Gibbins
	P.J. Laporte
	J.M. Seaton
	J.A. Brophy
Staff Geologist:	C. Ellis
Archive Geologist:	J.C. Crux
Project Geologist:	V.A. Jackson
Regional Manager, Mining Lands:	E.D. Cook
Mining Recorders:	T. Miedema
	E.J. McLeod

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Department of Indian Affairs and Northern Development

The Department of Indian Affairs and Northern Development (DIAND) is responsible for the administration of all mines and mineral activities in the Yukon and Northwest Territories. DIAND, as part of the federal government, administers the policy and legislative instruments which govern the mining industry in both territories.

Within DIAND's Northern Affairs Program, major functional groups, which deal directly with the mining industry, are the Northern Resources and Economic Planning Branch and the Northern Environment Branch at Headquarters, and the Regional Northern Affairs Program Branches in the Yukon Region and Northwest Territories Region.

The Northern Resources and Economic Planning Branch at Headquarters consist of three directorates: Northern Economic Planning, Oil and Gas Management and Major Projects, and Mining Management and Infrastructure. This branch is accountable for the development of departmental strategies, policies, legislation, plans and programs related to northern economic development, including the development and management of non-renewable resources and northern economic infrastructure. In addition, the Branch has a headquarter's function in the co-ordination of federal and territorial activities in the area of northern economic resource development and departmental policies and mechanisms to provide socio-economic development and benefits.

In 1982, the Northern Resources and Economic Planning Branch underwent a re-organization which resulted in the establishment of the Mining Management and Infrastructure Directorate, integrating the Transportation and Communications Division, Northern Roads and Airstrips Division, Non-Renewable Resources Development Division and the Mining Division. The Mining Management and Infrastructure Directorate brings the mining and infrastructure elements of the Northern Program together to give co-ordination on issues related to mineral policy, mineral resources, mining industry development, mining legislation and infrastructure support.

The Mining Management and Infrastructure Directorate develops and administers federal northern mineral policy and legislation, assesses infrastructure requirements of existing and potential resource oper-

ations requiring roads, airstrips and other transportation modes, and administers mining and mineral rights. The Directorate consists of the Mining Administration Division, the Mineral Policy Division and the Infrastructure Division.

Mining Administration Division

The Mining Administration Division develops policy related to the regulation of the Northern mineral industry, which includes providing for the consultative process with industry and initiating and drafting of appropriate acts, regulations and policy documents related to the disposition and to the administration of mineral rights in the Yukon Territory and Northwest Territories. The Division administers the royalty provisions of the *Yukon Quartz Mining Act, Canada Mining Regulations* and *Territorial Coal Regulations*. The Division advises and negotiates with various government agencies whose responsibilities interface with mining in the Territories, provides information on current and proposed exploration and mining developments and maintains a microfiche library of assessment reports, geological reports and other mineral resource information.

Mineral Policy Division

The Mineral Policy Division develops policies and plans to promote the orderly management and development of mineral resources in the Yukon and Northwest Territories. In support of these activities, it conducts studies and investigations of the economic aspects of mineral industry operations. Similar studies and investigations are also carried out to assess proposed major new mine developments in the Territories and to monitor existing operations. A major activity of the Division, together with Mining Administration Division and Infrastructure Division, at present, is the development of a northern mineral policy to guide mineral development in the Territories over the next decade. Although only the preliminary phases of policy development have been completed, the Minister has stated that he would like to address such issues as the role of mining in the northern economy, the involvement of native people, the provision of infrastructure, the creation of a favourable investment climate through the maintenance of an appropriate fiscal and regulatory regime and the establishment of an appropriate balance between people, minerals and the environment.

Infrastructure Division

The Infrastructure Division is responsible for policy, assessing, planning, programming and funding of infrastructure requirements in the North including roads, airstrips and other transportation modes within the general framework of northern development strategies, policies, plans and programs for northern economic development. The Division provides overall management for the Northern Roads Program. In addition, it manages the Northern Resource Roads Program under which the Department enters cost sharing agreements with industry for the construction of initial and permanent access roads.

Regional Offices - Yukon and Northwest Territories

The Yukon Region Branch and Northwest Territories Region Branch of the Northern Affairs Program are major functional groups, which under the direction of regional Directors General, administer the mandate of the Program and the provisions of mining legislation and regulations within the respective Territories. Offices are located at Whitehorse, Y.T. and Yellowknife, N.W.T.

The Regional Branches have the following subunits: Mining Lands Section, Geological Services Sections and a Mining Inspection Section (in the Yukon only).

Mining Lands Sections

The Mining Lands Section in the Yukon and Northwest Territories administrative offices have been divided into seven mining districts. A mining recording staff is responsible for the disposition of mineral rights within each district in accordance with applicable legislation. There is a Supervising Mining Recorder in each territory, whose principal function is to ensure that the regulatory requirements are followed in the administration of the various mining acts and regulations.

Geological Services Sections

Geological Services Sections publish geological reports and maps and provide geological services to the mineral industry in both Territories. Offices are maintained at Whitehorse and Yellowknife. Two core libraries, the H.S. Bostock Library in Whitehorse and the C.S. Lord Library in Yellowknife preserve diamond drill core.

Each core library has laboratory facilities for core splitting, diamond-saw cutting, thin section preparation and core storage. Regional and district geologists conduct mineral property examinations, collect rock and mineral specimens and advise the mineral industry, government departments and research scientists on geological and exploration matters. Department geologists assist prospectors in identifying rock and mineral specimens, by conducting prospector training courses and preparing geological compilation maps on mineralized areas.

Mining Inspection Section

In the Yukon, the Mining Inspection Section gives advice on the *Mining Safety Ordinance* and *Mine Safety Regulations* of the Yukon Territory as well as the *Blasting Ordinance and Regulations of the Yukon Territory*.

It also prepares new safety legislation when required. A regional mining engineer is stationed at Whitehorse. This senior mining engineer has a staff consisting of a district engineer, an electrical-mechanical engineer, an environmental engineer, a mine rescue superintendent, three claim inspectors and a clerk.

The Section is responsible for the following: inspection of mines, quarries and blasting operations to ensure compliance with safety legislation; inspection of mineral claims to ensure compliance with the *Yukon Quartz Mining Act* and the *Yukon Placer Mining Act*; ensuring that sufficient mine personnel are trained in mine rescue, recovery operations and first aid; conducting ventilation and dust surveys; monitoring radioactive contamination, and carrying out environmental studies at underground and surface mining properties.

Table 7, Mineral Production - 1976-1985

Yukon Territory - Yukon

Mineral	1976	1977	1978	1979	1980	1981	1982	1983	1984(R)	1985(P)
Gold	$ 4 401 075	4 656 118	8 518 731	13 749 271	63 029 000	66 382 000	39 721 000	50 337 000	44 419 000	43 098 000
g	1 111 949	921 907	1 202 149	1 190 268	2 982 000	3 746 000	2 656 000	3 006 000	2 960 000	3 098 000
Silver	$ 12 809 321	20 154 760	28 462 559	54 218 064	114 120 000	32 339 000	29 943 000	6 891 000	18 825 000	12 675 000
g	92 697 630	127 415 268	143 459 000	129 982 000	147 000 000	80 000 000	95 000 000	15 000 000	54 000 000	45 000 000
Lead	$ 15 990 040	47 627 667	64 322 403	103 374 279	71 558 000	54 935 000	25 733 000	307 000	1 539 000	877 000
kg	32 035 681	68 621 899	79 233 298	78 250 062	65 771 000	55 970 000	35 493 000	520 000	2 083 000	1 520 000
Copper	$ 16 045 963	8 953 814	16 474 354	18 422 058	27 082 000	20 123 000	14 654 000	3 977 000		
kg	10 642 540	5 843 210	10 018 826	7 778 231	10 433 000	9 094 000	7 510 000	1 904 000		
Zinc	$ 39 233 926	80 562 287	74 076 827	109 460 866	88 313 000	94 237 000	58 519 000	31 000	244 000	41 000
kg	47 300 153	102 846 637	96 673 141	113 572 783	90 938 000	78 806 000	54 537 000	27 000	173 000	32 000
Bismuth	$								2 000	10 000
kg									162	1 000
Cadmium	$ 13 220	11 595	355					6 000	9 000	9 000
kg	2 284	1 670	58					2 000	2 000	3 000
Asbestos	$ 35 310 723	47 493 872	26 948 800							
tonnes	103 431	95 590	53 255							
Sand and Gravel	$						550 000	1 438 000	5 105 000	1 225 000
	t						463 000	480 000	3 074 000	700 000
Coal (E)	$ 189 000	322 000	318 000	363 000	287 000	368 000				
tonnes	9 046	18 779	16 578	23 003	16 529	20 860				
Total	$123 813 268	209 460 113	218 804 029	299 244 538	364 389 000	268 016 000	169 120 000	62 987 000	70 143 000	57 935 000

Source: Mineral Policy Sector, Energy, Mines and Resources and Northern Resources and Economic Planning, Indian Affairs and Northern Development.
(P) Preliminary Figures, (R) Revised Figures, (E) estimated.

Table 8, Mineral Production - 1976-1985

Northwest Territories

Mineral	1976	1977	1978	1979	1980	1981	1982	1983	1984(R)	1985(P)
Gold	$ 24 390 081	31 336 428	45 769 718	61 868 488	96 920 000	85 495 000	91 415 000	144 570 000	191 071 000	180 585 000
g	6 162 252	6 204 583	6 458 948	5 355 926	4 209 000	4 825 000	6 113 000	8 634 000	12 732 000	12 981 000
Silver	$ 14 342 774	18 716 934	23 854 173	34 770 651	41 331 000	13 465 000	16 073 000	33 743 000	20 361 000	9 615 000
g	103 794 822	118 325 557	120 237 000	83 358 000	53 000 000	33 000 000	51 000 000	74 000 000	59 000 000	34 000 000
Copper	$ 639 980	445 850	518 993	941 732	679 000	613 000	419 000	214 000	130 000	
kg	424 649	291 959	315 624	397 191	262 000	277 000	215 000	102 000	69 000	
Lead	$ 26 440 157	40 833 313	56 898 673	80 117 935	55 853 000	44 680 000	46 367 000	47 901 000	66 647 000	44 805 000
kg	52 942 453	58 832 599	70 088 814	60 645 969	51 337 000	45 522 000	63 955 000	81 161 000	90 198 000	77 631 000
Zinc	$122 438 035	125 104 245	143 911 352	205 600 051	172 556 000	159 764 000	229 110 000	269 951 000	386 813 000	341 923 000
kg	147 610 457	159 709 355	187 809 913	213 323 454	175 685 000	133 604 000	213 523 000	234 883 000	274 920 000	269 655 000
Cadmium	$ 3 179	2 677						10 000	1 034 000	758 000
kg	549	386						3 000	214 000	209 000
Bismuth	$							163 000	34 000	68 000
kg								32 000	3 000	4 000
Tungsten Trioxide	$ 24 435 000	41 516 000	47 310 800	52 924 000	67 646 000	43 263 000	38 353 000	11 221 000	33 584 000	38 598 000
kg	2 168 154	2 284 409	2 885 619	3 254 067	4 007 000	2 515 000	2 925 00	1 126 000	3 112 000	3 500 000
Arsenic Trioxide (E)	$					561 000	3 862 000	2 345 000	5 837 000	1 696 000
t						1 094	1 780	982	4 684	4 098
Sand and Gravel	$						41 482 000	32 479 000	36 323 000	33 350 000
t							6 625 000	5 905 000	7 249 000	6 750 000
Stone	$						1 268 000	14 601 000	4 617 000	795 000
t							323 000	2 409 000	729 000	127 000
Total	$212 690 206	257 955 447	318 262 909	436 222 857	434 985 000	347 841 000	468 349 000	557 198 000	746 451 000	652 193 000

Source: Mineral Policy Sector, Energy, Mines and Resources and Northern Resources and Economic Planning, Indian Affairs and Northern Development.
(P) Preliminary Figures, (R) Revised Figures. (E) estimated.